

REMARKS

Claims 1-16, 18-21, 23-24, 35-37, 39-42 and 44-45 are in the case and presented for reconsideration. Claims 17, 22, 25-34, 38 and 43 have been canceled. Claims 1, 5, 6, 7, 11, 12, 13, 18, 35 and 39 have been amended. No new matter has been added.

Applicant's claimed present invention has been amended in order to more particularly point out that the apparatus and method utilizes a catheter having a position sensor fixed in a vicinity of the distal end of the catheter which is adapted to generate a position signal and that the controller is adapted to receive the position signal wherein the position signal is indicative of six dimensions of location and orientation information and, wherein the controller drives the end-effector to position the distal tip of the catheter at the desired position based on the six dimensions of location and orientation information.

Claims 1-4, 6-10, 12, 18-29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,808,665 (Green) in view of U.S. Patent No. 6,123,699 (Webster, J.R.). Green discloses an endoscopic surgical instrument and method for use based on a teleoperator system having a control section containing motors and linkages which operate an insertion section with five or more degrees of freedom. Not only does Green not disclose the ability to manipulate an end-effector using a thumb control, but also, the Green reference does not contain any teaching, suggestion or even inference relating to controlling a catheter having a position sensor fixed in a vicinity of the distal tip of the catheter which generates a position signal wherein a controller receives the position signal, which is indicative of six dimensions of location and orientation information, and wherein the controller drives the end-effector to position the distal tip of the catheter at the desired position based on the six dimensions of location and orientation information derived from the position sensor.

Webster, J.R. discloses an omni-directional steerable catheter. Although this reference discloses the use of a slidable button on the handle of the catheter for controlling movement of the catheter, the reference does not in anyway address controlling the catheter under robotic control using a controller and a position sensor on the catheter which generates a position signal indicative of six dimensions of location and orientation information wherein the controller drives

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the end-effector in order to position the distal tip of the catheter at a desired position based on the sixth dimensions of location and orientation information.

Claims 5, 11, 13-17, 30-45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,808,665 (Green) in view of U.S. Patent No. 6,123,699 (Webster, J.R.) and U.S. Patent No. 6,246,898 (Vesely). Although Vesely discloses a steerable catheter with position tracking capability and a computer pointing device, the tracking system taught by this reference is specifically directed toward a 3-D tracking system which is only capable of determining XYZ coordinates. Column 13, Lines 28-56. Accordingly, even if these references were to be combined in the manner as suggested, the combination of these references still fail to achieve or suggest Applicant's claimed present invention as amended.

Accordingly, by this amendment and for the reasons outlined above, the present invention is both patentably distinct and non-obvious over the cited prior art references, and favorable action is respectfully requested.

Respectfully submitted,

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